

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Satoshi SUGAHARA et al.

Application No.: New U.S. National Stage of  
PCT/JP04/004512

Filed: September 30, 2005

Docket No.: 125471

For: TUNNEL TRANSISTOR HAVING SPIN-DEPENDENT TRANSFER  
CHARACTERISTICS AND NON-VOLATILE MEMORY USING THE SAME

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Pursuant to 37 CFR §1.56, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO-1449. Unless otherwise indicated herein, one copy of each reference is attached. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

- ☒ 1. This Information Disclosure Statement is being filed (a) within three months of the U.S. filing date of this non-CPA application, OR (b) before the mailing date of a first Office Action on the merits in the present application. No certification or fee is required.
- ☒ 2. Relevance of references 9-11 is discussed in the present specification.
- ☒ 3. The references 1-8 were cited in the International Search Report. An English language version of the International Search Report is attached for the Examiner's information.
- ☒ 4. English language Abstracts of the non-English language references 1-3 are attached hereto.
- ☒ 5. A computer-generated English language translation of Japanese Patent Publications 1-3 has been obtained from the website of the Japanese Patent Office ([<http://www.jpo.go.jp>]), and is attached, but has not been reviewed for accuracy.

10/551802

New U.S. National Stage of PCT/JP04/004512

JP20 Rec'd PCT/JP 30 SEP 2005

- ☒ 6. An English translation of references 6 and 7 are attached.

Respectfully submitted,



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Date: September 30, 2005

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<p>DEPOSIT ACCOUNT USE AUTHORIZATION Please grant any extension necessary for entry; Charge any fee due to our Deposit Account No. 15-0461</p>
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Form PTO-1449 (REV. 8-83)		US Dept. of Commerce PATENT & TRADEMARK OFFICE		ATTY DOCKET NO. 125471		APPLICATION NO. New U.S. National Stage of PCT/JP04/084612 <b>10/551802</b>	
INFORMATION DISCLOSURE STATEMENT  (Use several sheets if necessary)				APPLICANTS Satoshi SUGAHARA et al.			
				FILING DATE September 30, 2005			

  

U.S. PATENT DOCUMENTS						
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS

  

FOREIGN PATENT DOCUMENTS						
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS
	1)	JP A 11-238924 w/ abstract & trans	08/31/1999	JAPAN		
	2)	JP A 2001-250998 w/ abst. & trans	09/14/2001	JAPAN		
	3)	JP A 2003-78147 w/ abst. & trans	03/14/2003	JAPAN		

  

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)		
	4)	LeClair et al., "Large Magnetoresistance using Hybrid Spin Filter Devices," Applied Physics Letters, Vol. 80, No. 4, pp. 625-627, January 28, 2002
	5)	Matsukura et al., "Control of Ferromagnetism in Field-Effect Transistor of a Magnetic Semiconductor," Physica E, Vol. 12, pp. 351-355, 2002
	6)	Sugawara et al., "Proposal of a Spin-Filter Transistor and its Application," 30a-ZH-1, No. 3, pp. 1566, March 27, 2003 with English translation
	7)	Matsuno et al., "Reconfigurable Logic Devices Based on the Spin-Filter Transistor," 30a-ZH-2, No. 3, pp. 1566, March 27, 2003 with English translation
	8)	Datta et al., "Electronic Analog of the Electro-Optic Modulator," Appl. Phys. Lett., Vol. 56, No. 7., pp. 665-667. February 12, 1990
	9)	Inomata, "Present and Future of Magnetic RAM Technology," IEICE Trans. Electron., Vol. E84-C, No. 6, pp. 740-746, June 2001
	10)	Ohno et al., "Electric-Field Control of Ferromagnetism," Nature, Vol. 408, pp. 944-946, December 21-28, 2000
	11)	Chiba et al., "Electrical Manipulation of Magnetization Reversal in a Ferromagnetic Semiconductor," Science, Vol. 301, pp. 943-945, August 15, 2003

  

EXAMINER	DATE CONSIDERED
Examiner: Initial if citation considered, whether or not citation is in conformance with M.P.E.P. 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

Date: September 30, 2005